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Environmental Protection
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July 11, 1991

MEMORANDUM

SUBJECT: Report of Data Validation for Ridgefield Brick and Tile VOA Samples 91130150, 91130152, 91130154, 91130156, 91130158, 91130160, 91130161, 91130162, 91130164, 91130166 and 91130168.

FROM: Joe Blazevich, Chief
GC/MS Section

TO: Marsha Bailey, Project Officer
Ridgefield Brick and Tile Study

The following is a QA data review of the VOA analysis of water samples collected for the Ridgefield Brick and Tile Study and analyzed at the Manchester Laboratory. This review covers the following samples:

91130150	91130152	91130154	91130156	91130158	91130160
91130161	91130162	91130164	91130166	91130168	

The project code for these samples is HWD-127A. The account number is AGDD3A.

Data Qualification

The following comments refer to the laboratory performance in meeting the quality control specifications outlined in the CLP Statement of Work, Organic Analysis, revision 2/88.

I. Holding Times: Acceptable.

All of the samples were held fourteen days or less between collection and analysis. No data qualifiers are required on the basis of holding time data.

II. GC/MS Tuning and Performance: Acceptable

All tuning summaries agreed with the raw data. All bromofluorobenzene ion abundance met criteria. All analyses were preceded by a tune less than 12 hours prior to analysis. No data qualifiers are required on the basis of tuning data.

III. Initial Calibration: Acceptable

An extended seven point calibration curve was constructed for all target compounds on 4/01/91. The calculations of the response factors was checked and the calculation method was correct. All response factors were over 0.05.

No analytes exceeded the 30% RSD limit. No qualifiers are required based on %RSD or response facotrs.

IV. Continuing Calibration: Acceptable

4/09/91 Samples 01130150, 91130152, 91130154, 91130156, 91130158 and blank ABW1099.

The response factors for all target analytes were above 0.005. Many analytes had a % diff. value greater than the 25% maximum. Since the continuing calibration is used to compute the working response factors, the % diff. does not necessarily indicate a change in the accuracy of the analytical result. Therefore, no additional qualifiers are required on the basis of % diff. and response factors in the continuing standard.

4/10/91 Blank ABW1100, and Samples 91130160, 91130161, 91130162, 91130164, 91130166, 91130168.

The response factors for all target analytes were above 0.005. Many analytes had a % diff. value greater than the 25% maximum. Since the continuing calibration is used to compute the working response factors, the % diff. does not necessarily indicate a change in the accuracy of the analytical result. Therefore, no additional qualifiers are required on the basis of % diff. or response factors in the continuing standard.

4/11/91 Blank ABW1101, and Spikes 91130152Y and 91130152Z.

The response factors for all target analytes were above 0.005. Many analytes had a % diff. value greater than the 25% maximum. Since the continuing calibration is used to compute the working response factors, the % diff. does not necessarily indicate a change in the accuracy of the analytical result. Therefore, no additional qualifiers are required on the basis of % diff. or response factors in the continuing standard.

V. Blanks: Acceptable

A blank was analyzed each day prior to the analysis of samples and matrix spikes. Although some target analytes were detected in the blanks, most were below the reporting limit of 1 ug/L. Since the sample results did not exceed ten times the amounts listed for common VOA contaminates (e.g.methylene chloride, acetone, and 2-butanone) and five times the amounts for the other target analytes, each of these analytes was reported with the appropriate quantitation limit and the qualifier U.

VI. Surrogates: Acceptable

All surrogate recoveries were within specification for all blanks, matrix spikes and samples. No data qualifiers were assigned based on surrogate recovery data.

VII. Matrix Spike and Matrix Spike Duplicate (MS/MSD):

All MS and MSD recoveries and %diff. were acceptable except for 1,1-dichoroethene that gave a %diff of 19 (14 is the limit). Except for this analyte in sample 91130152 which was given the qualifier UJ, no data qualifiers are required based on MS/MSD recoveries.

VIII.Internal Standards Performance: Acceptable

The retention time variations of all internal standards were within 30 seconds of the daily standard, which is acceptable. The %area of all internal standards fell within the specified 50% to 200% of the daily standard. No data qualifiers were required on the basis of internal standards data.

IX. TCL Compound Identification: Acceptable

All TCL compounds' relative retention times were within 0.06 units of the related standards' in the continuing calibration standard. All criteria were met for mass spectral ion matching and abundance matching.

X. Compound Quantitation: Acceptable

Compound quantitation was evaluated correctly. The appropriate internal standards were used. The correct quantitation ions and relative response factors were used. No additional qualifiers are required on the basis of compound quantitation.

XI. Tentatively Identified Compounds: Acceptable

No tentatively identified compounds were detected.

Overall Assessment for the Case

The usefulness of the data is based on the criteria outlined in "Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses, (revision 2/88)."

All of the requirements for data qualifiers from the preceding sections were accumulated. Each sample data summary sheet and each compound were checked for positive or negative results. From this the overall need for data qualifiers for each analysis was determined. In cases where more than one of the preceding sections required data qualifiers, the most restrictive qualifier has been added to the data.

In general, all unqualified data can be used without restriction. The usefulness of qualified data should be treated according to the severity of the qualifier. Each qualifier has been defined below. Should questions arise regarding the qualification of data and its relation to the usefulness, the reader is encouraged to contact the Region Ten Laboratory.

DATA QUALIFIERS

U	-	The analyte was not detected at or above the reported result.
J	-	The analyte was positively identified. The associated numerical result is an estimate.
EXP	-	The result is equal to the number before EXP times 10 to the power of the number after EXP. As an example 3EXP6 equals 3×10^6.
REJ	-	The data are unusable for all purposes.
N	-	There is evidence the analyte is present in this sample.
NJ	-	There is evidence that the analyte is present. The associated numerical result is an estimate.
UJ	-	The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
NAF	-	Not analyzed for.
*	-	The analyte was present in the sample. (Visual aid to locate detected compounds on the report sheet.)